

Amendment to the Claims:

This listing of claims will replace all prior versions.

Listing of Claims:

1. (presently amended) A process for dehydrogenating an alkylaromatic hydrocarbon consisting essentially of selected from at least one of: ethylbenzene, propylbenzene, isopropyl benzene and methyl benzene; comprising:

contacting a gaseous stream containing the at least one alkylaromatic hydrocarbons with a dehydrogenation catalyst at reaction temperature and in concurrent upward flow through a dehydrogenation riser reactor wherein the average contact time between the hydrocarbon and catalyst within the dehydrogenation riser reactor is from about 0.5 to about 10 seconds, and wherein the catalyst has an average residence time within the dehydrogenation riser reactor from about 0.5 to about 40 seconds; and

transferring the hydrocarbon and catalyst from the dehydrogenation reactor to a separation device wherein the average contact time between the hydrocarbon and catalyst while at reaction temperature in the separation device is less than about 10 seconds; and

transferring a portion of the catalyst from the separation device to a fluid bed catalyst regenerator, wherein the catalyst is regenerated.

2. (cancelled)

3. (previously presented) A process of claim 1 wherein the catalyst is gallium-based and the average residence time of the catalyst within the dehydrogenation riser reactor is from about 1.0 to about 12.0 seconds.

4. (previously presented) A process of claim 1 wherein the total average contact time between the hydrocarbon and catalyst while at reaction temperature in the dehydrogenation riser reactor and separation device is less than about 10 seconds.

5. (previously presented) A process of claim 4 wherein the average contact time between the hydrocarbon and the catalyst within the dehydrogenation riser reactor is from about 1 to about 4 seconds, the average contact time between the hydrocarbon and catalyst while at reaction temperature in the separation device is less than about 5 seconds, and the total average contact time in the dehydrogenation riser reactor and separation device is less than about 7 seconds.

6-9. (cancelled)

10. (previously presented) A process of claim 1 wherein the temperature within the dehydrogenation reactor is from about 500 to about 800°C, and the pressure is from 25.5 (3.7) to about 446 (64.7) kilopascals (psia) .

11-13. (cancelled)

14. (previously presented) A process of claim 1 wherein the catalyst from the recycle loop and regenerator are combined and introduced into the dehydrogenation reactor.

15. (previously presented) The process of claim 1 wherein the dehydrogenation catalyst comprises gallium carried by an alumina or alumina silica support.

16. (previously presented) The process of claim 15 wherein the catalyst comprises an alkali or alkaline earth metal selected from at least one of: sodium, lithium, potassium, rubidium, magnesium, calcium, strontium and barium, and further comprises promoter selected from at least one of: manganese and platinum.

17.-20. (cancelled)

21. (previously presented) A process of claim 1 wherein the contacting occurs in the absence of steam.

22. (previously presented) A process of claim 1 wherein the gaseous stream further contains one or more inert diluent carrier gases.